A Career in Aerospace – Limitless!


Lockheed Martin
USAF F35 Lightning II

Airbus A380

ACM
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Tele: 860-513-3205
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What is ACM ?

A Collaboration of Leading Small & Mid-Sized Aerospace Manufacturers in Connecticut & SW Massachusetts

Independent Companies Behind a Single Mission:

To be a World Leader in Manufacturing of Aerospace Components Unsurpassed Quality, Competitively Priced, Delivered on Time

THE WORLD'S AEROSPACE ALLEY.
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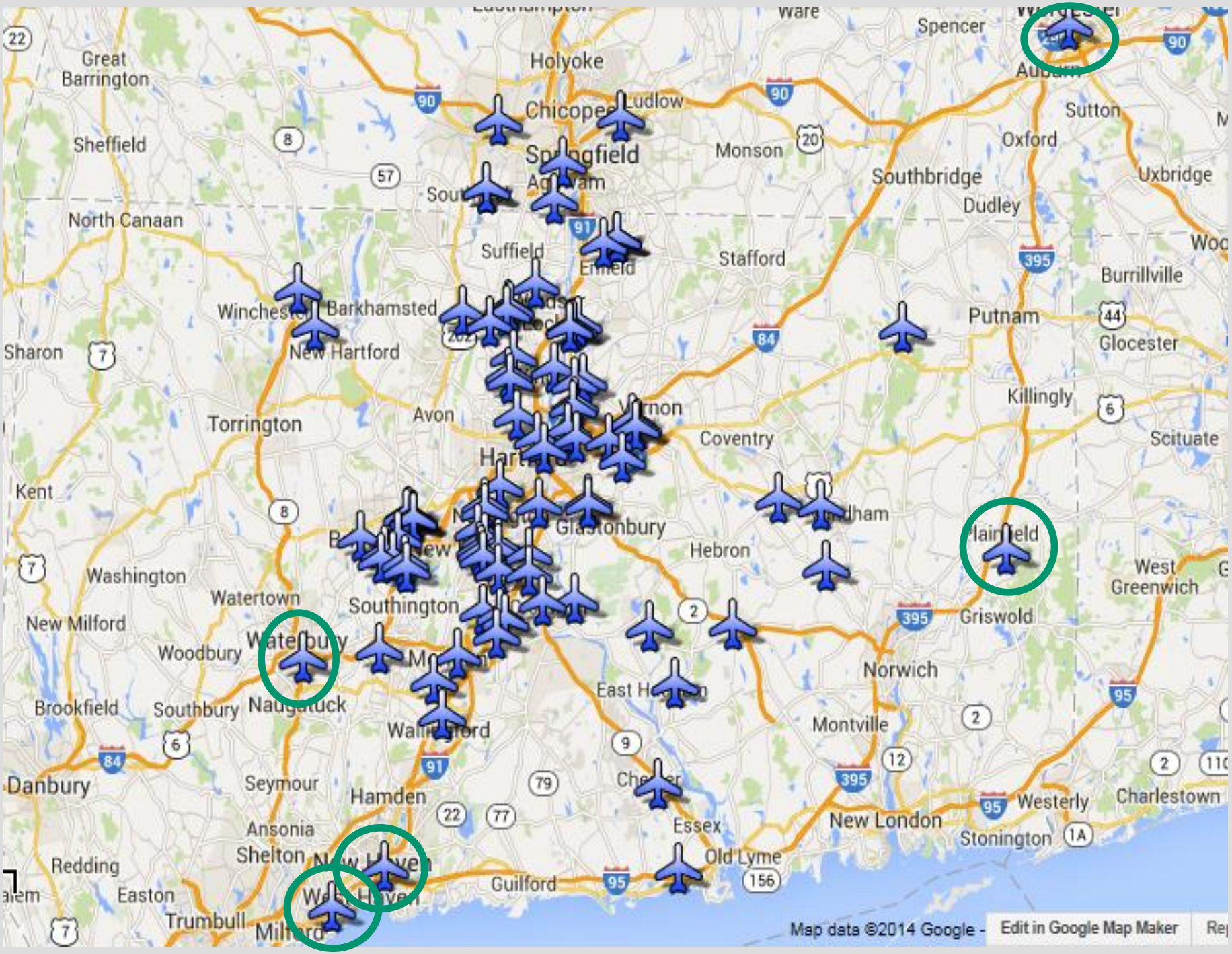
ACM Statistics

- Membership = 95 Firms (CT Mfg = 4,350)
  - 17 new members in ‘14 with larger geography
    (20% increase without solicitation or membership drive)
  - 7000 employees (CT Mfg = 163,000)
  - $2 Billion annual revenue
  - $600Mil in wages (CT Mfg = $13.6B)
  - Primarily Tier 1 and Tier 2 Engine Component Suppliers for OEMs (PWA/PWC, GE, Rolls-Royce UK & Indy, Snecma France, Honda)
  - More recent diversification up the Value Stream to direct Airframe Components for Boeing (Seattle & Carolina), Airbus (France & Alabama) and Bombardier (Mexico & Canada)


Great Barrington
Sheffield
North Canaan
Sharon
Torrington
Kent
Washington
New Milford
Brookfield
Danbury
Redding
Easton
Trumbull
Milford
Woodbury
Watertown
Southbury
Naugatuck
Waterbury
Seymour
Ansonia
Shelton
Hamden
Wallingford
Southington
Avon
Barkhamsted
New Hartford
Winchester
Suffield
Enfield
Springfield
Holyoke
Chicopee
Ludlow
Monson
Agawam
Stafford
Coventry
Vernon
Glastonbury
Hebron
East Haddam
Essex
Old Lyme
Guilford
Madison
Old Saybrook
Montville
Norwich
Griswold
Killingly
Putnam
Dudley
Southbridge
Oxford
Sutton
Auburn
Spencer
Ware
Burrillville
Glocester
Scituate
Uxbridge
West Greenwich
Westerly
Charlestown
Stonington
New London
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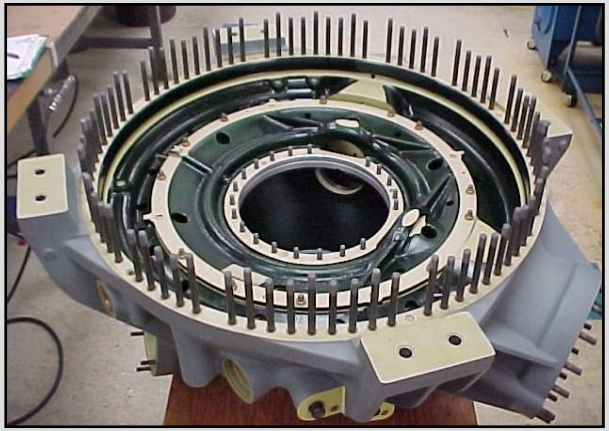
What Do We Actually DO???

We Manufacture Detail Parts



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What Do We Actually DO???

Aerospace Companies Design and Build.....

Detail Components and Subassemblies

PW GTF

Major System Assemblies

PW 4000-94

Boeing 747

Finished Aerospace System

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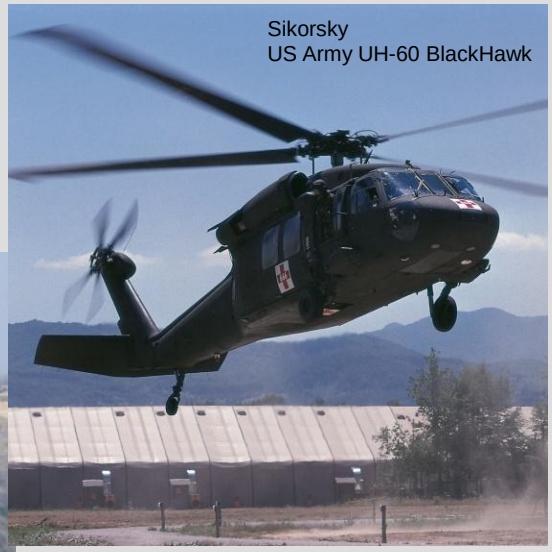
What Do We Actually DO???

Military sector includes....

Mature & New Aircraft Programs

Transport Aircraft



Helicopters

Ground Attack Aircraft

Fighter Aircraft

Bomber Aircraft

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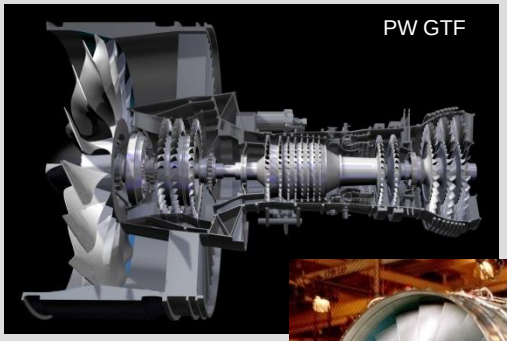
What Do We Actually DO???

Commercial sector includes....

Airbus A380

Passenger Airliners

Boeing 787


PW GTF


IAE V2500

Turbine Propulsion


Sikorsky S76

Helicopters

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What Do We Actually DO???

Space Sector includes....

Rocket Engines

Unmanned Launch Vehicles

Manned Vehicles

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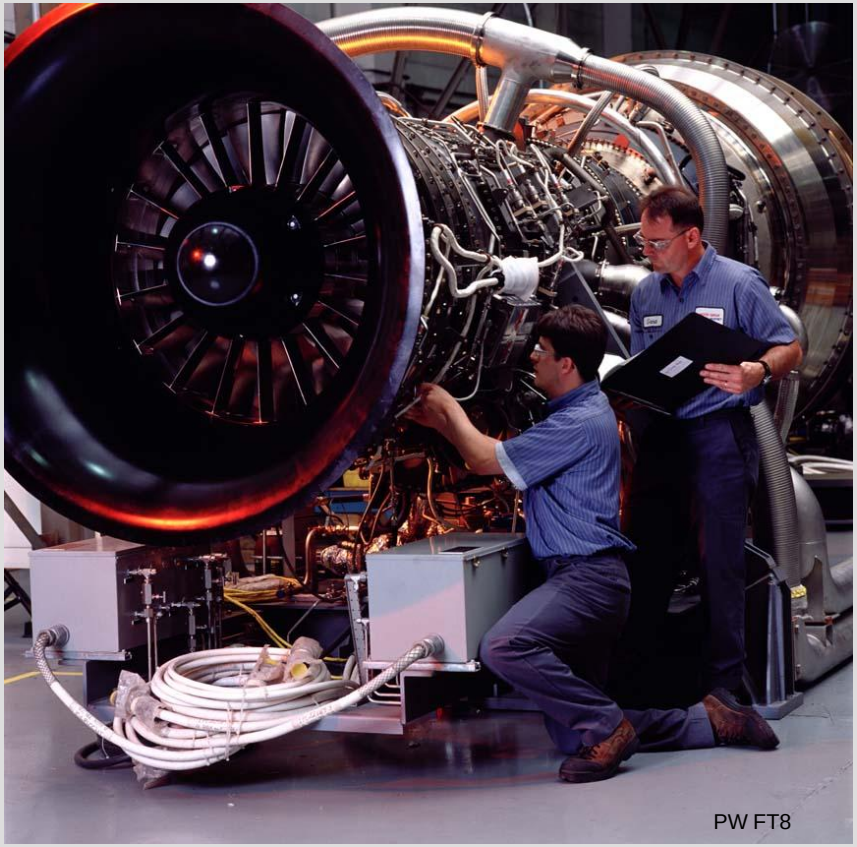
What Do We Actually DO???

Power Generation sector includes....



Ground Based Gas Turbines

Generate Electrical Power

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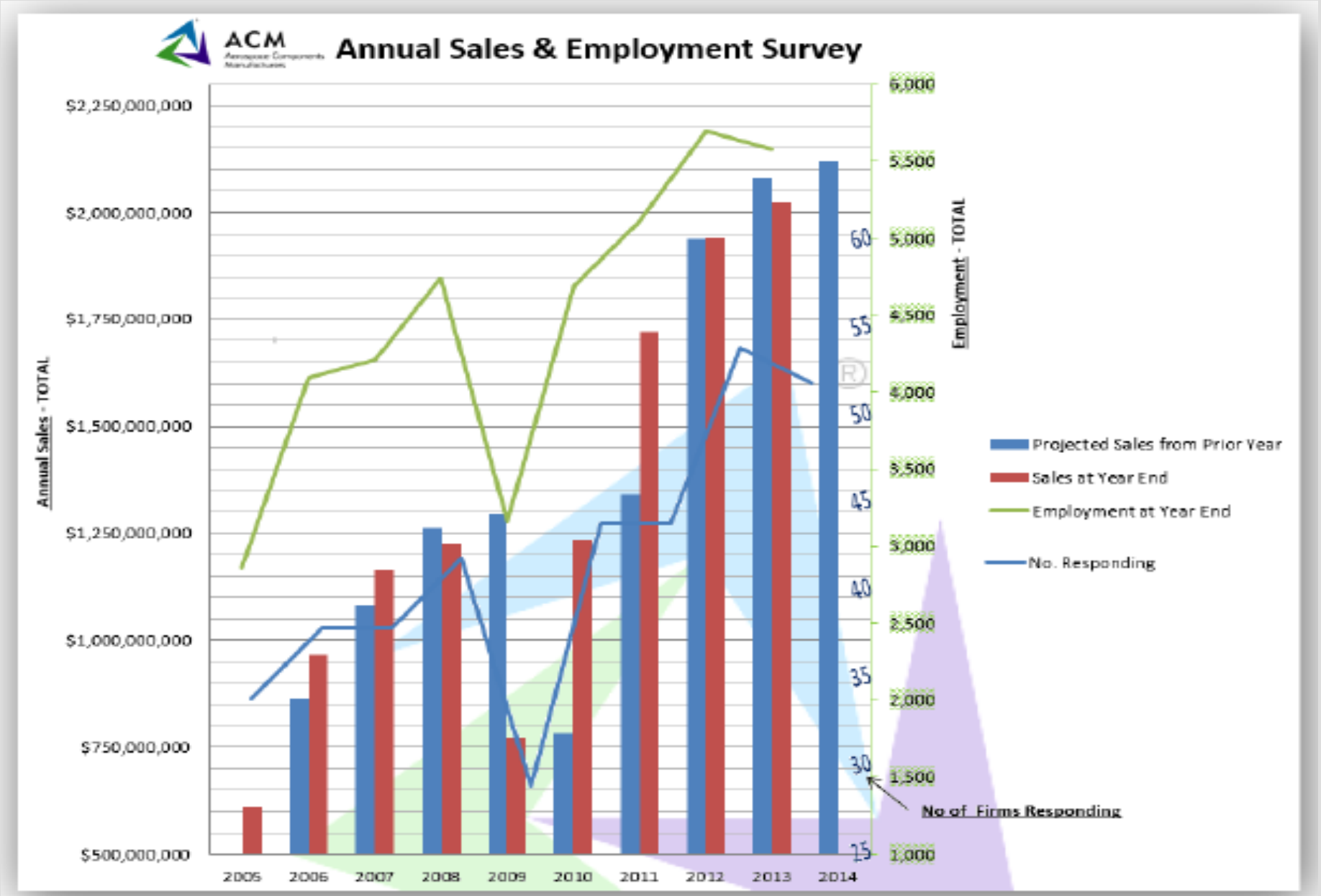
ACM – The last 10 years
(January 2014 Survey)



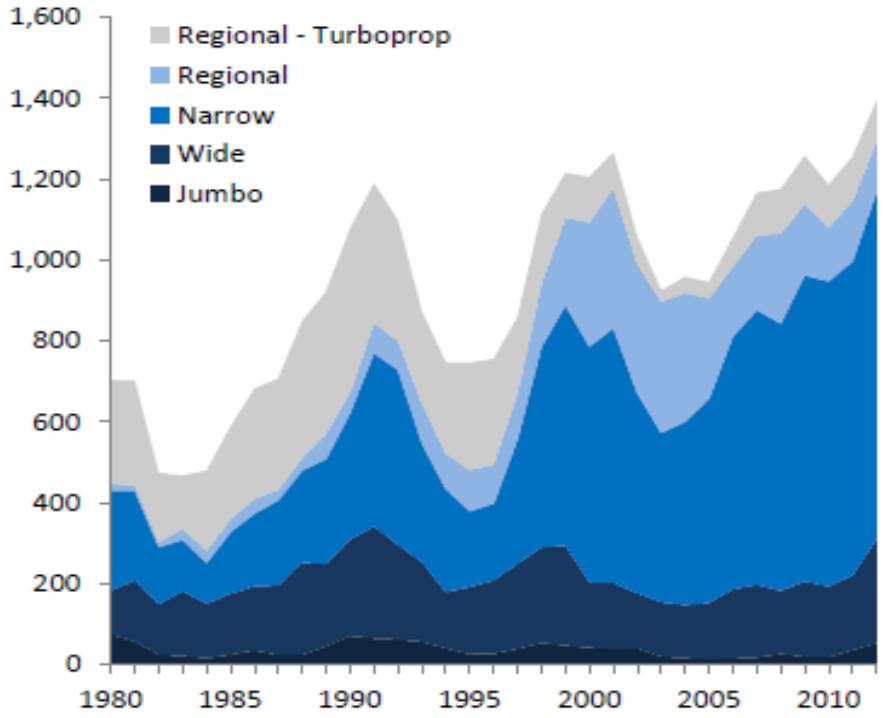
Industry Projections

Commercial Aerospace Tsunami of Growth

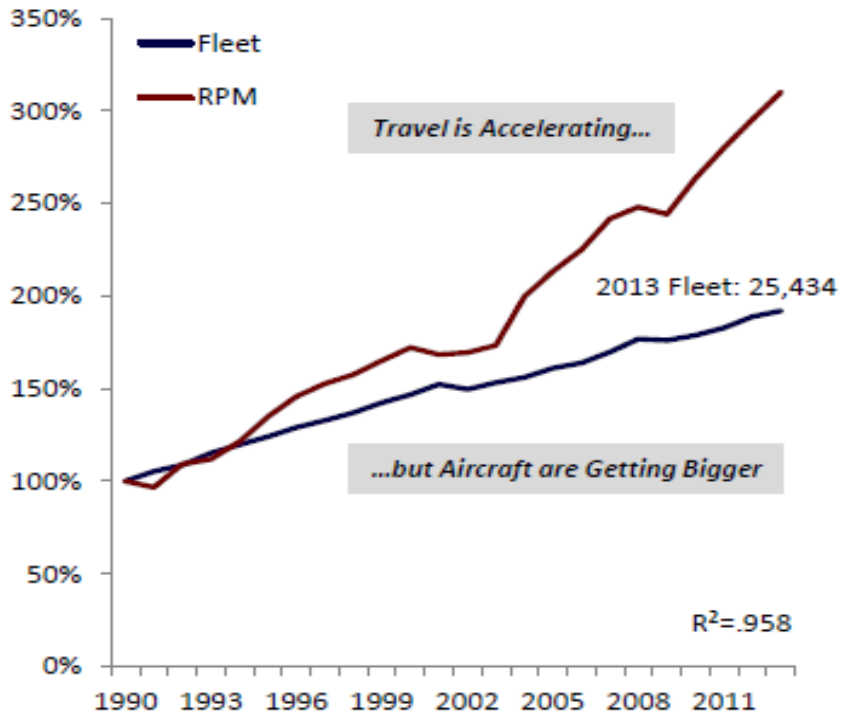
Where are we in the cycle?

Commercial aircraft deliveries have followed a cyclical historical pattern, but with consistent long-term growth

Commercial Unit Deliveries by Segment
(1980 – 2012)



Global Fleet vs. Global RPM
(1990 – 2013)



Note: RPM (Revenue Passenger Miles); dataset includes western jets and turboprops and relevant nonwestern platforms; fleet = in-service aircraft at Jan 1, each year
Sources: Ascend, Airline Monitor, OEMs, RSAdvisors analysis

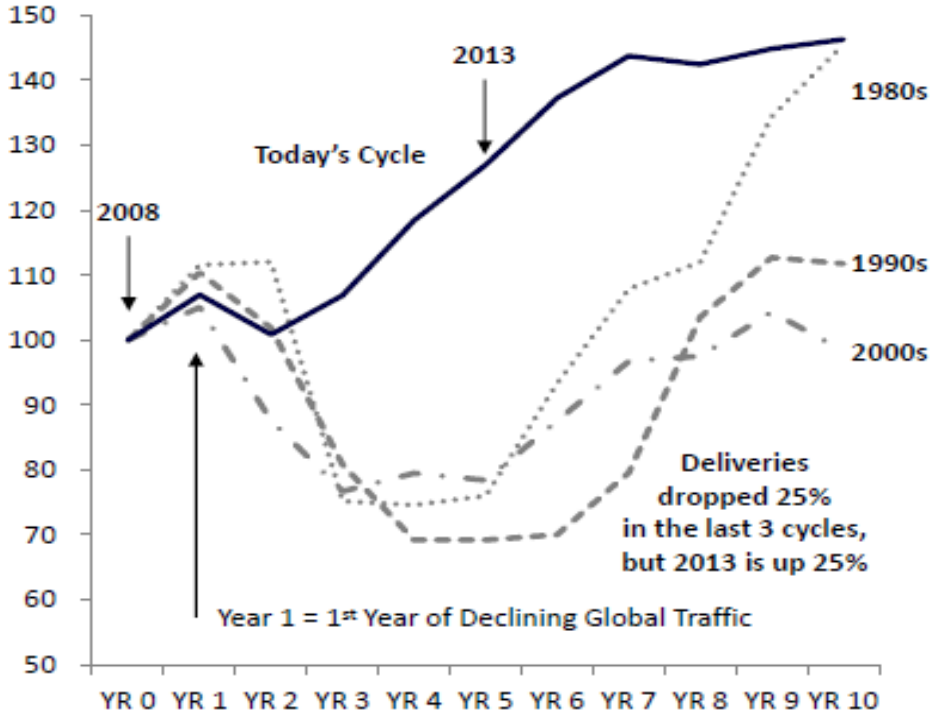
Industry Projections

Commercial Aerospace – How Long will it Last?

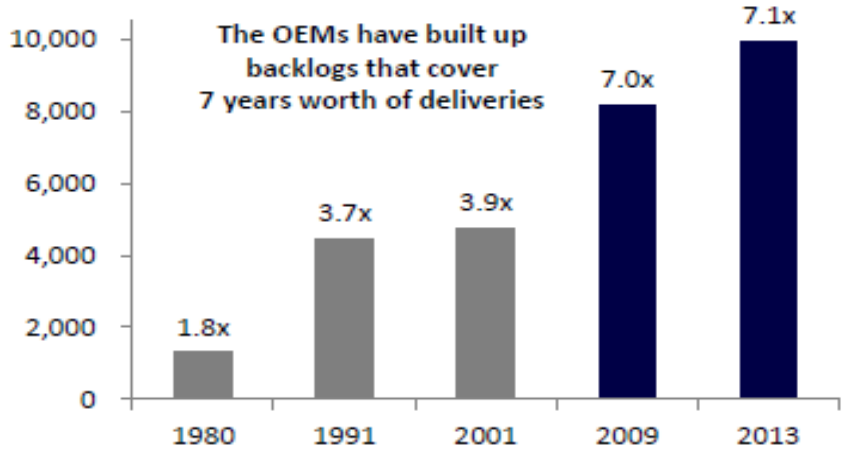
Where are we in the cycle?

This cycle truly has been different and it looks sustainable

Commercial Aircraft Cycles
(Indexed Aircraft Deliveries)



Commercial Aircraft Backlog
(Backlog / Previous Full Year Deliveries)



- Record backlogs support production ramps provide high out-year visibility
- Globalization of demand reduces regionally-driven order volatility
- Airframers are deliberately managing production rates for gradual ramps
- High fuel prices and cheap financing support preference for new v. used aircraft

Sources: Ascend, Airline Monitor, OEMs, RSAdvisors Commercial Aircraft Model, RSAdvisors analysis

Industry Projections

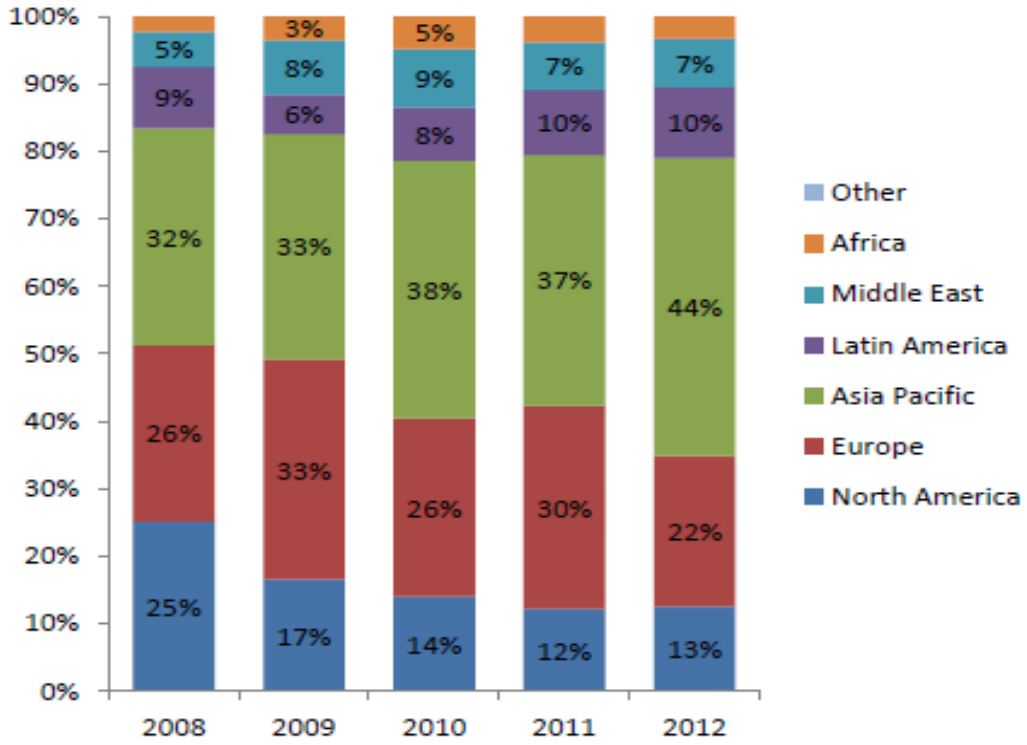
Commercial Aerospace – Where's the demand coming from?

New-build Commercial & Regional Aircraft

Asia-Pacific has continued to grow its share of global deliveries, while North America's proportion has still not recovered from the recession

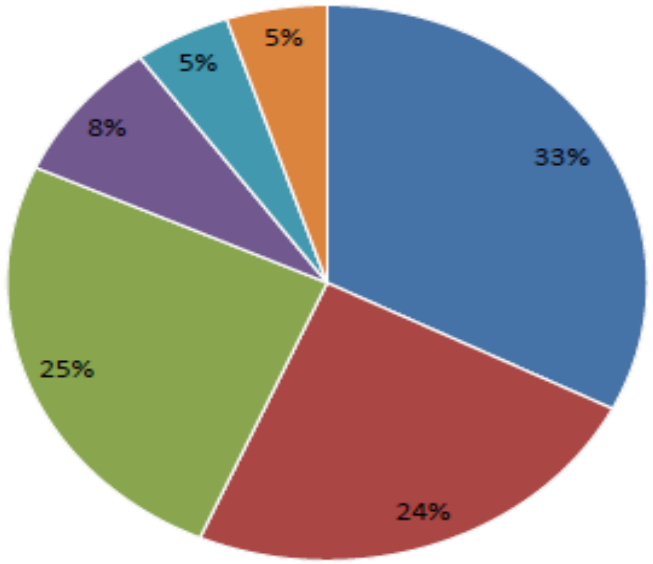
Commercial Unit Deliveries by Region

(2008-2012)



Current In-Service Commercial Fleet by Region

(September 2013)



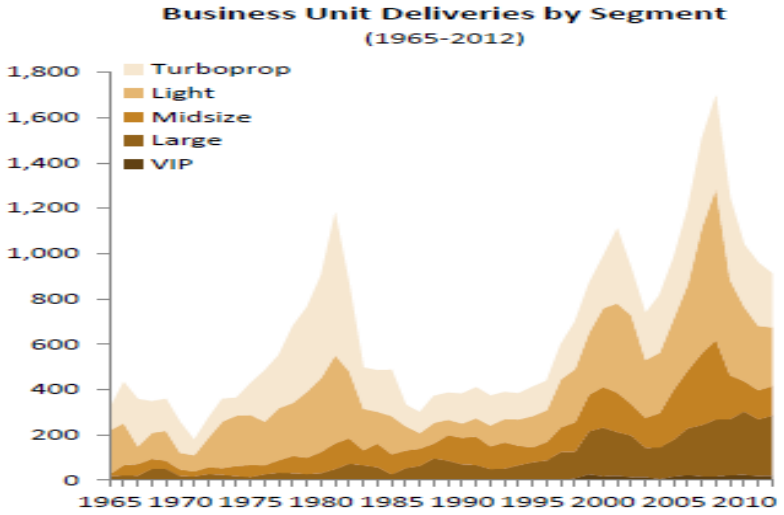
Total Fleet: 26,154 Aircraft

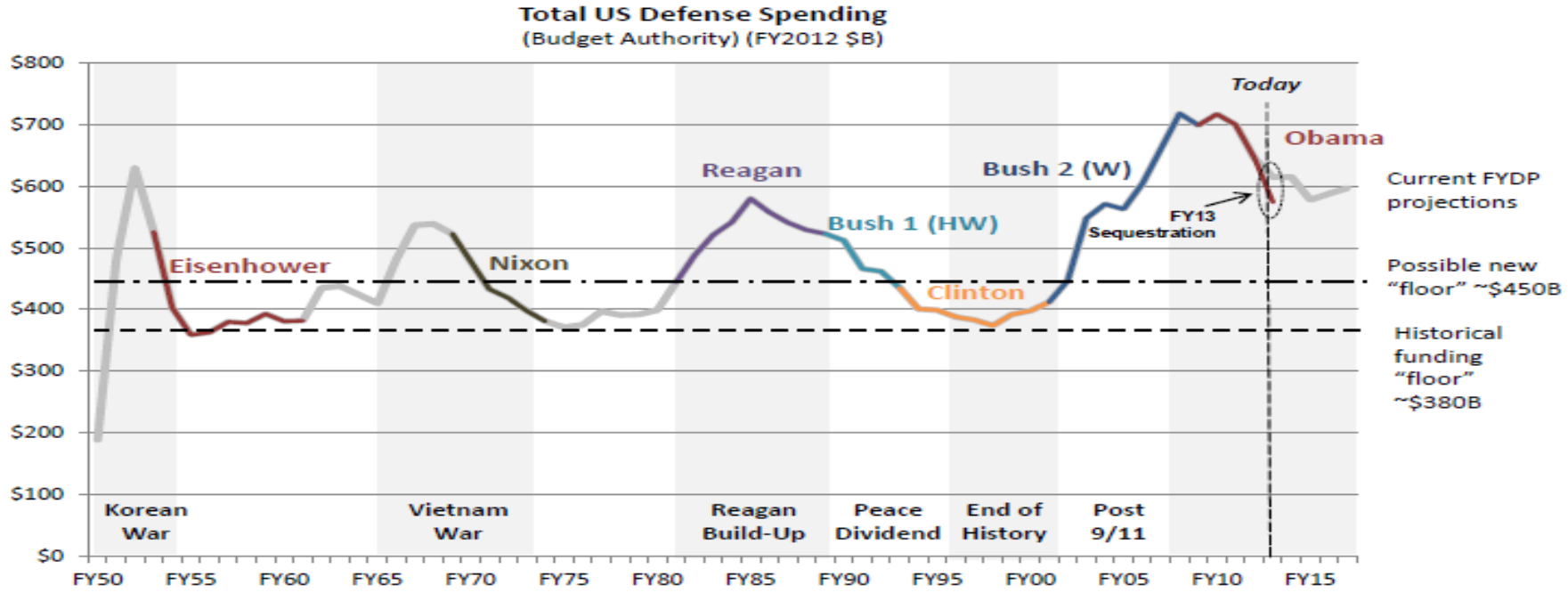
Note: Dataset includes commercial western jets & turboprops in-service; current fleet total is 26,154; Latin America includes the Caribbean; Europe includes CIS (e.g. Russia); the United States comprises ~27% of the global commercial fleet; China, Canada, UK, and Germany comprise 8%, 4%, 4%, and 3% , respectively; 5-year deliveries = 6,333

Sources: Ascend, OEMs, RSAdvisors analysis

Industry Projections

Biz Jet and Defense – The 2 down market segments





Manufacturing Job Projections

On Average, 22% of manufacturers expect to grow their workforce above 5% in 2015 (approx. 9,000 jobs), with that number forecasted to increase to 29% by 2018 (approx. 47,000 jobs).

In addition, 85% of manufacturers plan to hire primarily full-time employees by the end of 2015, a significant jump from 30% in 2011.

Manufacturers report that overall employability and technical skills, advanced skills, and interpersonal/teamwork skills were the qualities most lacking among recent or attempted hires.

Entry-level production and CNC machinists are two of the most in demand positions, while manufacturers said Tool-and-Die makers and CNC programmers were the most difficult jobs to fill.

While manufacturers are pursuing a number of strategies to address the skills gap, including in-house training and expanded apprenticeship programs, the survey's findings highlight the need for even greater collaboration between educational institutions and businesses.

Data source:
CBIA 2014 Survey of CT mfg. Workforce Needs.

Where does ACM get the workforce?

1. Industry: other members and non-members; “musical chairs”

2. 4-year colleges: primarily Engineering and Management

3. Community College Manufacturing Programs: Basic Skills needing OJT
   - Issues: A) OJT reduces productivity (STEP-UP helps offset), B) Many companies don’t have robust training programs, C) Current curriculum primarily focused on CNC – not customized like Companies are.
   - Solutions: Some well capitalized Companies creating partnership with Colleges for customized training moving some OJT into the classroom (Ex. EDAC & Tunxis, Bristol Spring) – Advancing current DOL Apprenticeship

4. Tech High Schools: Basic Skills needing OJT which requires robust in-house training programs (apprentice/interns); Issues = Same as #3

5. Displaced/Unemployed Workers: STEP-UP incentive provides more of a safety net & allows for more risk taking, esp. for resumes with “gaps”

6. Returning Veterans: Untapped source of discipline and responsibility

7. Comprehensive High Schools: Minimal pipeline due to lack of marketing & understanding . Another untapped source

Path to ACM Members?

High School or Technical Trade School Graduate's Career Path

College Certificate Career Path

Have Cert, Seeking Employment?

Interested in Cert Pgms?

College Graduate Career Path

Have Degree, Seeking Employment?

Going to College?

Contact CT's Community Colleges for
Manufacturing Technology programs
Middlesex CC
Vinyl Tech Adult Ed

Contact your High School Guidance Counselor to understand *best college programs for aerospace*

--Visit the ACM website at www.aerospacecomponents.org and go to Member Profile Page to *obtain contact info* on each company

--Link from ACM website to each Company's website *to learn about their firm*

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AEROSPACE CAREER FINANCIAL OPPORTUNITIES

High School or Technical Trade School Graduate's Career Path

Entry Level Positions

$28,000 to $39,000 per year

$10 to $14 per hour + OT*

College Certificate Career Path

Entry Level Positions

$34,000 to $45,000 per year

$12 to $16 per hour + OT*

College Graduate's Career Path

Engineering Entry Level

(with a 4 year BS degree)

$58,000 to $65,000 per year

After 2 Yrs OJT Experience
(Average Performer)

$37,000 to $48,000 per year

$13 to $17 per hour + OT*

After 2 Yrs OJT Experience
(High Performer)

$54,000 to $68,000 per year

$19 to $24 per hour + OT*

After 2 OTJ as CNC Programmer

$80,000 to $110,000 per year

After 5 Yrs OJT Experience
(Average Performer)

$51,000 to $62,000 per year

$18 to $22 per hour + OT*

After 5 Yrs OJT Experience
(High Performer)

$68,000 to $82,000 per year

$24 to $29 per hour + OT*

Aerospace Career paths *typically* include higher than average benefits - medical/dental/vision/life insurances, paid vacations & holidays, 401K plans, profit sharing, tuition reimbursement, etc.

Note: Plans WILL vary from company to company!

* Based on an Average Total Workweek of 50 Hours

OJT - "On the Job Training" in a production environment including formal classroom training where applicable.

Calculated annual values assume 52 weeks of straight time (no OT).

Information provided above are current or envisioned examples of pay scales.
This data is provided for general information only and is NOT guaranteed in any manner.

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How ACM markets career opportunities:

- ✓ ACM Annual Career Fair (Oct 23rd A.M.)
  - 800+ Middle School, Comprehensive High School, Tech High School, Community College and Four-Year College students
  - Attendance has grown 33% annually since 2010 inception
- ✓ Participation on high school and college advisory Boards
- ✓ Speaking engagements at Middle Schools, Comprehensive High Schools & Tech Schools
- ✓ Career fair displays at Comprehensive High Schools, Chambers of Commerce & Colleges & Dream It.Do It. events
- ✓ Most Recent: Partnerships with Comprehensive High Schools to host weekly “Intro to Manufacturing” class as part of elective curriculum (Ex. Granby with Delta Mfg & Region 4 with Whalen Mfg.)

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Marketing Bullets for a Career in Aerospace Manufacturing?

Industry is Stable and Growing
Business supports both
Commercial and Defense Aerospace Sectors

Innovative, High Technology
Constantly improving – Leading the World!

Viable & Long Term Career Opportunities
Growth Opportunities / Multiple Career Paths

Salaries are among the Highest in Connecticut
Excellent Benefits Packages

Work in a Clean, Safe & Progressive Environment – Not "your grandfather's" factory

Willingness to Train
Entry Level Skills
Career Advancement Skills

Broad Range of Opportunities

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What are the Career Opportunities Available in Connecticut's Aerospace Industry?

MANUFACTURING
Machine Operators / Machinists (77)
Sheet Metal Fabricators (18)
Welders (26)
Assemblers (5)
Internal Transportation / Drivers
Technicians
Supervisors (11)

TECHNICAL SUPPORT
Manufacturing Engineers (33)
Numerical Control (N/C) Programmers (7)
Quality Engineers (4)
Lab Technicians
Maintenance Workers (6)
Supervisors (3)

BUSINESS SUPPORT
Sales & Business Development (1)
Accounting & Financial Management
Procurement (2)
Business Management
Office Staff & Clerical Staff
Human Resource (4)

QUALITY ASSURANCE
Inspectors (4)
Coordinate Measuring Machine Operators (2)
Technicians
Supervisors

Parenthesis indicate current posted openings

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What are the Requirements for Entry-Level Positions?

- **High School diploma** or **equivalent** with reading and math capability
- **Dependable**; Good work habits
- **Willingness to work, take direction** and **interact** as a member of a team; demonstrate flexibility and be open to suggestions and change
- **Mechanical aptitude** and interest; must have a sense of how things go together
- Attention to detail
- **Strong desire to learn:** *there is a lot to learn!*
- **Independent Thinking/Problem Solving**
- Certifications are a plus (NIMS, AWS/Welding, CNC Cert, etc.)

Good character and attitude!

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Views of Current State Programs

- Small Business Express & MAA: excellent for growth & capex
- STEP-UP: Many members have successfully utilized to hire unemployed with “holes” & encourage full funding for continuity
- Expansion of Community College Manufacturing Programs: Has greatly increased the basic skill pipeline and should continue & be expanded for increased class sizes or more colleges!
- Re-investment in the Tech High Schools: Increased the level of talent being produced due to the equipment they are now utilizing (now on par with Colleges) while also making them more appealing thereby increasing pipeline – Must continue & be expanded!
- Apprenticeship Program: Advantage is tax credit and curriculum but under utilized because tax credit doesn’t apply to pass through entities and curriculum is “vanilla”; STEP-UP and custom basic skills training programs are being utilized over Apprenticeships
- Incumbent Worker Training: Completely lacking; Was once a source for customized in-house training & access to experts who could develop training programs

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